

Application No. 10/086,102

Docket: 2001-0370

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A method for coding image data, the method comprising:
 converting a block of image data into transform coefficients;
 quantizing the transform coefficients such that all, some, or none of the transform coefficients become zero;
 constructing a single entity indicating which transform coefficients are non-zero;
 and
 coding the single entity as an integer using an arithmetic coder wherein the values of the transform coefficients are coded in any fixed order.
2. (original) The method for coding image data of claim 1, wherein coding the single entity as an integer further comprises coding the single entity as an integer using an adaptive arithmetic coder.
3. (original) The method for coding image data of claim 1, wherein coding the single entity as an integer further comprises coding the single entity as an integer using a semi-adaptive arithmetic coder.
4. (original) The method for coding image data of claim 1, wherein coding the single entity as an integer further comprises coding the single entity as an integer using a non-adaptive arithmetic coder.
5. (original) The method for coding image data of claim 1, wherein each transform coefficient is coded according to its own context, based on the transform coefficient.
6. (original) The method for coding image data of claim 2, wherein each transform coefficient is coded according to its own context, based on the transform coefficient.

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7. (original) The method for coding image data of claim 1, wherein the single entity is a bit vector.

8 - 12. (cancelled)

13. (original) A bitstream of data generated by a method of coding data, the method comprising:

converting a block of image data into transform coefficients;

quantizing the transform coefficients such that all, some, or none of the transform coefficients become zero;

constructing a single entity indicating which transform coefficients are non-zero;

and

coding the single entity as an integer using an arithmetic coder wherein the values of the transform coefficients are coded in any fixed order.

14. (original) The bitstream of claim 13, wherein coding the single entity as an integer further comprises coding the single entity as an integer using an adaptive arithmetic coder.

15. (original) The apparatus of claim 13, wherein coding the single entity as an integer further comprises coding the single entity as an integer using a semi-adaptive arithmetic coder.

16. (original) The apparatus of claim 13, wherein coding the single entity as an integer further comprises coding the single entity as an integer using a non-adaptive arithmetic coder.

17. (original) The apparatus of claim 13, wherein the single entity is a bit vector.

18. (original) A computer-readable medium that stores instructions for controlling the operation of a computer device to perform data coding according to a method comprising the steps of:

converting a block of image data into transform coefficients;

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quantizing the transform coefficients such that all, some, or none of the transform coefficients become zero;

constructing a single entity indicating which transform coefficients are non-zero; and

coding the single entity as an integer using an arithmetic coder wherein the values of the transform coefficients are coded in any fixed order.

19. (original) The computer-readable medium of claim 18, wherein coding the single entity as an integer further comprises coding the single entity as an integer using an adaptive arithmetic coder.

20. (original) The computer-readable medium of claim 18, wherein coding the single entity as an integer further comprises coding the single entity as an integer using a semi-adaptive arithmetic coder.

21. (original) The computer-readable medium of claim 18, wherein coding the single entity as an integer further comprises coding the single entity as an integer using a non-adaptive arithmetic coder.

22. (original) The computer-readable medium of claim 18, wherein the single entity is a bit vector.

23. (original) A method of coding data not having a clearly defined relationship, the method comprising:

converting the data into transform coefficients;

quantizing the transform coefficients such that all, some or none of the transform coefficients become zero;

constructing a single entity from the quantized transform coefficients; and

coding the single entity using an arithmetic coder wherein the values of the transform coefficients are coded in any fixed order.

24. (original) The method of claim 23, wherein the single entity is a bit vector.

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25. (original) A method of decoding a bitstream, the bitstream being coded using a single entity coded as an integer using an arithmetic coder, the method comprising:

decoding the single entity wherein the values of transform coefficients are decoded in any fixed order;

deconstructing the single entity to determine which coefficients are non-zero;

dequantizing the transform coefficients to determine whether all, some or none of the coefficients are zero; and

converting the dequantized transform coefficients into block image data.

26. (original) The method of decoding a bitstream of claim 25, wherein the single entity is a bit vector.

27. (original) The method of decoding a bitstream of claim 25, wherein the single entity was coded as an integer using an adaptive arithmetic coder.

28. (original) The method of decoding a bitstream of claim 25, wherein the single entity was coded as an integer using a semi-adaptive arithmetic coder.

29. (original) The method of decoding a bitstream of claim 25, wherein the single entity was coded as an integer using a non-adaptive arithmetic coder.

30. (new) A computing device that codes an image, the computing device comprising:

a module configured to convert a block of image data into transform coefficients;

a module configured to quantize the transform coefficients such that all, some, or none of the transform coefficients become zero;

a module configured to construct a single entity indicating which transform coefficients are non-zero; and

a module configured to code the single entity as an integer using an arithmetic coder wherein the values of the transform coefficients are coded in any fixed order.

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31. (new) The computing device of claim 30, wherein the module configured to code the single entity as an integer further codes the single entity as an integer using an adaptive arithmetic coder.

32. (new) The computing device of claim 30, wherein the module configured to code the single entity as an integer further codes the single entity as an integer using a semi-adaptive arithmetic coder.

33. (new) The computing device of claim 30, wherein the module configured to code the single entity as an integer further codes the single entity as an integer using a non-adaptive arithmetic coder.

34. (new) The computing device of claim 30, wherein the single entity is a bit vector.